

REMARKS

I. Double Patenting

In the Office Action dated October 4, 2004, the Examiner provisionally rejected claims 1-10 and 14-20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of co-pending Application No. 10/635,351. The Examiner stated that although the conflicting claims are not identical, they are not patentably distinct from each other because the cited co-pending Application teaches all of the basic features of the claimed invention. The Examiner further indicated that this is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In response to the aforementioned rejection under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of co-pending Application No. 10/635,351, the Applicants are therefore submitting herewith a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c). The Applicants therefore submit that the aforementioned rejection to claims 1-20 has been traversed and should be withdrawn.

II. Claim Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1, 4, 10, 14 and 17 under 35 U.S.C. § 102 as being anticipated by Kurtz et al., hereinafter "Kurtz" (U.S. Patent No. 5,999,082).

Regarding claims 1, 10 and 14, the Examiner argued that Kurtz teaches a diaphragm (19) associated with a sensor cover and a base (15) located proximate

to the sensor cover (i.e., citing column 2, lines 52-59), and a dimple (20) located centrally within the diaphragm (19) wherein the dimple (20) comprises a component that is separate from diaphragm (19) and wherein the dimple (20) contacts a sense element of the sensor (citing column 3, lines 28-40, and FIG. 3 of Kurtz).

Regarding claims 4 and 17, the Examiner argued that Kurtz teaches wherein the dimple (20) comprises a circular portion, which contacts the sense element, and wherein the dimple (20) comprises a highly polished surface to reduce stress concentrators (citing column 3, lines 33-44 and FIG. 1 of Kurtz).

The Applicant respectfully disagrees with this assessment. Applicant's claim 1 is directed toward a diaphragm cover apparatus for a sensor, comprising: a diaphragm associated with a sensor cover and a base located proximate to the sensor cover; and a dimple located centrally within and inward to the diaphragm, wherein the dimple comprises a component that is separate from the diaphragm and wherein the dimple contacts a sense element of the sensor. The dimple 20 of Kurtz, on the other hand, is not formed inwardly into the cover. Instead, FIG. 2 of Kurtz indicates that dimple 20 extends outward from the cover of Kurtz. In fact, Kurtz points out at col. 3, lines 33-35 that "as also seen in FIG. 2, there is an upward dimple or projection or dome 20 in the metal diaphragm."

Additionally, the Applicant notes that Kurtz does not teach that the dimple is in contact with the sense element. FIG. 2 of Kurtz clearly shows that the dome 20 is filled with oil 14. The sensor 10 of Kurtz is located below the oil 14. That is, the oil is located between sensor 10 of Kurtz and dome 20. Therefore, the dome 20 of Kurtz is never truly in contact with sensor 10 because the oil is located therebetween. This is further evidenced by col. 3, lines 38-39 of Kurtz, which

indicates, "The dimple or dome 20 enables the oil positioned above the sensor to increase in thickness." Again, such language indicates that dome 20 of Kurtz is not located in contact with the sense element of Kurtz.

The Applicant reminds the Examiner that in order to succeed in a rejection to one or more claims under 35 U.S.C. § 102(a) based on a prior art reference, the prior art reference must disclose all of the limitations and features of the rejected claim or claims. If the prior art reference lacks even one feature/limitation of the rejected claim, the rejection must be withdrawn. In this case, the Kurtz reference does not teach all of the limitations and features of the Applicants' claims 1, 4, 10, 14, and 17. The Applicant therefore submits that the rejection to claims 1, 4, 10, 14, and 17 has been traversed. Applicant respectfully requests withdrawal of these rejections.

III. Claim Rejections Under 35 U.S.C. §103

Requirements for Prima Facie Obviousness

The obligation of the Examiner to go forward and produce reasoning and evidence in support of obviousness under 35 U.S.C. §103 is clearly defined at M.P.E.P. §2142:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness necessary for establishing a rejection to a claim under 35 U.S.C. §103:

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. a reasonable expectation of success; and
3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness under 35 U.S.C. §103 by the examiner (assuming there are no objections or other grounds for rejection), an Applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992).

Thus, in order to support an obviousness rejection under 35 U.S.C. §103, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met.

Kurtz

Claims 5-9 and 17-20 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Kurtz.

Regarding claims 5-9 and 17-20, the Examiner argued that Kurtz teaches the claimed invention except for the dimple being formed from a stainless steel material, a quartz sense element, a silicon sense element, and a ceramic sense element. The Examiner argued, however, that it would have been obvious to one having ordinary skill in the art of pressure sensing devices at the time the invention was made to modify Kurtz with a stainless steel material, a quartz sense element, a silicon sense element, and a ceramic sense element since it has been held to be within the general skill of a worker in the art to select a material on the basis of its

suitability and intended use. The Examiner therefore asserted that it would have been obvious to select any suitable material being readily available to the manufacture after undo experimentation for the purpose of creating a pressure sensing device that operates at optimum performance.

The Applicants respectfully disagree with this assessment and note that the arguments presented above against the rejection to claims 1, 4, 10, 14 and 17 under 35 U.S.C. § 102 as being anticipated by Kurtz apply equally to the rejection to claims 5-9 and 17-20 under 35 U.S.C. §103(a) as being unpatentable over Kurtz. Thus, because Kurtz does not teach or suggest all of the claim limitations of Applicants' claims 1, 4, 10, 14 and 17 as indicated above, the rejection to claims 5-9 and 17-20 fails under the third prong of the aforementioned *prima facie* obviousness test. That is, the Kurtz reference does not provide for the teaching or suggestion of all the claim limitations of Applicant's claims to claims 5-9 and 17-20, which includes all of the limitations and features of the claims from which claims 5-9 and 17-20 depend.

Therefore, the Applicants submit that the rejection to claims 5-9 and 17-20 has been traversed and should be withdrawn. The Applicants therefore respectfully request that the rejection to claims 5-9 and 17-20 be withdrawn.

Kurtz in view of Cullen

The Examiner rejected claims 2, 3, 11-13 and 15-16 under 35 U.S.C. § 103(a) as being unpatentable over Kurtz in view of Cullen (U.S. Patent No. 4,454,440).

Regarding claims 2, 3, 11, 15-16, the Examiner argued that Kurtz teaches the claimed invention except for a foil for blocking air permeation through the diaphragm when the sensor experiences pressure. The Examiner argued that Cullen teaches a foil (citing reference numeral 32, being read as a cover portion) for blocking air permeation (being read as a vacuum enclosure) of air through the diaphragm (20) when the sensor experiences pressure (citing column 3, line 59 to column 4, line 5). The Examiner argued that it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a foil as taught by Cullen in the pressure sensing device of Kurtz for the purposes of providing a secured structure preventing the contamination of outside elements to the diaphragm while increasing the accuracy of pressure measurements.

The Applicant respectfully disagrees with this assessment. The Examiner has not explained how reference numeral 32, i.e., the cover portion of Cullen, comprises a foil. Cover portion 32 is not a foil, but instead functions as a cover portion. Applicant's claim 3 includes a number of basic features, including a sensor cover and a base located proximate to said sensor cover, along with a foil. Thus, the foil is not a sensor cover. On the other hand, reference numeral 32 of Cullen refers to a cover portion, not a foil. Thus, Cullen teaches a cover portion 32, not a foil. Additionally, Applicant notes that Cullen does not teach the blocking of air permeation via a foil when the sensor experiences pressure. Column 3, line 59 to column 4, line 5 of Cullen refers only to a vacuum enclosure, but does not specifically teach a foil for blocking air permeation, which is taught by Applicant's claims 2-3, 11 and 15-16. Applicant also notes that neither Cullen nor Kurtz teach or suggest, either separately or in combination with one another, a diaphragm having an inward shaped, which is taught by Applicant's claims 2, 3, 11 and 15-16.

Regarding claims 12-13, the Examiner argued that Kurtz teaches the claimed invention except for the dimple being formed from a stainless material a ceramic material. The Examiner argued, however, that it would have been obvious to one having ordinary skill in the art of pressure sensing devices at the time the invention was made to modify Kurtz with a stainless steel material and a ceramic material since it has been held to be within the general skill of a worker in the art to select a material on the basis of its suitability and intended use. The Examiner therefore asserted that it would have been obvious to select any suitable material readily available to the manufacture after undo experimentation for the purpose of creating a pressure sensing device that operates at optimum performance.

The Applicant respectfully disagrees with this assessment. Regarding claim 3, the Applicant notes that amended claim 3 indicates that the diaphragm comprises an over-mold diaphragm that is located within the sensor cover, and that the dimple is located centrally within the over-mold diaphragm and the sensor cover. Neither Kurtz nor Cullen teach, disclose or suggest, either alone or in combination with one another, an over-mold diaphragm. The over-mold limitation is also taught by Applicant's claim 11. Again, neither Kurt nor Cullen teach, disclose or suggest, either alone or in combination with one another, an over-mold diaphragm, which is taught by Applicant's claim 11.

The Applicant also submits that the arguments presented above with respect to the rejection to claims 1, 4, 10, 14 and 17 under 35 U.S.C. § 102 as being anticipated by Kurtz apply equally to the rejection to claims 2, 3, 11, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Kurtz in view of Cullen. Thus, because Kurtz does not teach or suggest all of the claim limitations of Applicants' claims 1, 4, 10, 14 and 17 as indicated earlier, the rejection to claims 2, 3, 11, 15

and 16 fails under all three prongs of the aforementioned *prima facie* obviousness test.

First, the Examiner has not provided for some suggestion or motivation, either in the Cullen/Kurtz references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings in order to provide, for example, an inward shaped dimple. Second, the Examiner has not provided an explanation of why a reasonable expectation of success for providing such a feature would result from a combination of Cullen and Kurtz. Third, as indicated earlier, the Examiner has not explained how Cullen/Kurtz provides for the teaching or suggestion of all the claim limitations of Applicant's invention, including for example an inward shaped dimple.

Therefore, the Applicants submit that the rejection to claims 2, 3, 11, 15 and 16 has been traversed and should be withdrawn. The Applicants therefore respectfully request that the rejection to claims 2, 3, 11, 15 and 16 be withdrawn.

IV. Conclusion

In view of the foregoing discussion, the Applicants have responded to each and every rejection of the Official Action. The Applicants have clarified the structural distinctions of the present invention by amendments herein. The foregoing discussion and amendments do not present new issues for consideration and no new search is necessitated. Such amendments are supported by the specification and do not constitute new matter. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections and further examination of the present application.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned representative to conduct an interview in an effort to expedite prosecution in connection with the present application.

Respectfully submitted,



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